Remarks

Reconsideration is requested in view of the preceding amendments and the following remarks. By this Amendment, claims 7-8 are amended and new claims 34-39 are submitted for consideration. Upon entry of this Amendment, claims 1-10 and 34-39 are in the application.

Support for new claims 34-39 can be found in the specification at, for examples, FIGS. 5A-5D and page 12, line 18 to page 13, line 15. No new matter is introduced.

Rejections under 35 U.S.C. § 102

Claim 7 stands rejected as allegedly anticipated by Bacher, U.S. Patent 5,506,513 ("Bacher"). This rejection is traversed. Amended claim 7 recites an apparatus for delivering an electrical signal from an input coaxial cable to a substrate. The apparatus comprises an airline that includes a central conductor having an input end and an output end. The apparatus also comprises means for securing the input coaxial cable to the input end of the central conductor and communicating the electrical signal to the central conductor, and means for securing the output end of the central conductor to an output coaxial cable. Bacher does not teach or suggest such an apparatus. Instead, Bacher discloses a test fixture in which a signal contact (88) includes a spring section (100) and a contact end (102). The signal contact (88) is pre-bent downward so that the contact end (102) electrically contacts a pad (176) on a microwave integrated circuit (MIC) (11). The signal contact (88) terminates at the pad (102). Bacher's coaxial adaptors (82, 108) include electrical connections that terminate at the MIC (11). In contrast, claim 7 recites a central conductor of an airline that has an input end and an output end, and means for securing the input end and the output end to an input coaxial cable and an output coaxial cable, respectively. As noted above, the signal contact (88) of Bacher terminates upon connection to an MIC (11) and does not teach or suggest means for securing the input and output ends to an input coaxial cable and an output coaxial cable, respectively. Thus, Bacher fails to teach or suggest all the features recited in claim 7, and claim 7 is properly allowable over Bacher.

Rejections under 35 U.S.C. § 103 in View of Bacher and Weber

Claims 1-6 and 8-9 stand rejected as allegedly obvious in view of a combination of Bacher and Weber et al., U.S. Patent 4,473,807 ("Weber"). This rejection is traversed.

Claim 1 recites a transition for delivering an electrical signal propagating on a coaxial cable to a substrate. The transition comprises, in part, "an airline conductor situated substantially

parallel to the axis of the cavity and in electrical communication with the central conductor of the coaxial cable, wherein the airline conductor and the cavity are configured to form an airline having an impedance that is substantially the same as an impedance of the coaxial cable." Bacher fails to teach or suggest such an airline. Instead, Bacher teaches a signal contact (88) that has a contact spring section that is "pre-bent so as to be biased in a downward direction." Col. 6, lines 48-49. If Bacher's signal contact were modified to be parallel to an axis of a cavity, Bacher's apparatus would not work for its intended purpose, as there would be no electrical connection of the signal contact (88) to the MIC (11). Weber fails to cure the deficiencies of Bacher. Weber merely teaches a coaxial K inverter formed using a coaxial cylinder. Col. 2, lines 10-37. For at least this reason, claim 1, dependent claims 2-6, and new dependent claims 34-35 are properly allowable over any combination of Bacher and Weber.

The dependent claims are properly allowable for additional reasons as well. For example, claim 4 recites an output coaxial adapter configured to receive and retain a coaxial cable and couple the airline conductor to a coaxial output. No combination of Bacher and Weber teaches or suggests such an arrangement. As noted above, Bacher's signal contact (88) terminates at the MIC (11), and Bacher does not teach or suggest an airline conductor coupled to both a coaxial output and a coaxial input.

Claims 3 and 5 further recite that the interconnect includes a conductive puck that extends into the cavity and electrically contacts the airline conductor. No combination of Bacher and Weber teaches or suggest a puck that extends into the cavity. According to the Office action, Bacher's conductive pad can be considered a puck. Applicants respectfully disagree. As recited in claims 3 and 5, the puck (the interconnect) extends into the cavity to contact the airline conductor. In contrast, Bacher teaches that the signal contact (88) terminates in a contact spring section (100) that is prebent. As claimed, the puck extends into the cavity to electrically connect to the airline conductor while in Bacher, the conductor is bent for electrical connection.

Amended claim 8 recites a method of delivering an electrical signal to a substrate. The method comprises, in part, configuring an airline to receive the electrical signal at an airline input, contacting an interconnect region on the substrate to the airline conductor, and delivering the received electrical signal from the airline input to an airline output. No combination of Bacher and Weber teaches or suggests such a method. As noted above, Bacher teaches that a signal contact (100) terminates at a microwave integrated circuit, and does not teach or suggest contacting an interconnection region on a substrate and delivering an electrical signal to an

airline output. For at least this reason, claim 8 and dependent claims 9-10 are properly allowable.

Rejections under 35 U.S.C. § 103 in View of Bacher, Weber, and Baird

Claim 10 stands rejected as allegedly obvious from a combination of Bacher, Weber, and Baird, U.S. Patent 4,487,999. This rejection is traversed. Claim 10 depends from allowable claim 8, and is dependent for at least this reason.

New Claims 36-39

New claims 36 recites a transition for delivering an electrical signal propagating on a coaxial cable to a substrate. The transition comprises a coaxial input configured to receive a coaxial input waveguide, an airline defined by an airline conductor and an airline cavity, and a coaxial output configured to receive a coaxial output waveguide. The airline conductor extends from the coaxial input to the coaxial output, and the airline is configured to have an impedance that substantially matches an impedance of at least one of the coaxial input waveguide and the coaxial output waveguide. An interconnect conductor is situated in the airline cavity and configured to electrically couple a substrate to the airline conductor. No combination of cited references teaches or suggests such a transition, and new claim 36 and dependent claims 37-39 are properly allowable.

Conclusion

In view of the preceding amendments and remarks, all pending claims are in condition for allowance and action to such end is requested. If any issues remain, the Examiner is requested to telephone the undersigned.

Respectfully submitted,

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